

Guayusa, a Neglected Stimulant from the Eastern Andean Foothills¹

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AQUIFOLIACEAE

Ilex guayusa Loes.

Vernacular names:

Aguayusa, *guayusa*, *huayusa*, *guañusa*, *guaypusa*, *wayusa*, in eastern Ecuador, for both the beverage and the tree; the tree is called *weisa* by the Jívaros (11, p. 115, 304, 568), *kopiniak*, in the Záparo language (20, p. 539).

In a letter dated August 23, 1683, addressed to the Viceroy of Peru, Melchor Navarra y Rocafull, Duke of La Palata, the New Granadan Jesuit, Juan Lorenzo Lucero, describes an excursion made in 1682 into the basin of the Santiago or Parosa River, a left affluent of the Río Marañón, a region inhabited by the savage Jívaro Indians. Describing the activities of medicine men of the tribe in drinking certain beverages during the performance of their medico-magical rites, Lucero specifies: "They put together these evil herbs [*Datura*, *Banisteriopsis*, and other narcotic plants], with *guañusa* and tobacco, also invented by the devil, and allow them to boil until the small remaining quantity of juice becomes the quintessence of evil, and the faith of those who drink it is rewarded by the devil with the fruit of malediction, and always to the great misfortune of many . . ." (10, p. 626).

The Jívaro Indians were, according to Lucero, well disposed people of good physical appearance. "To maintain themselves at their best, they were accustomed to drink a decoction of an herb called *guayusa*, similar to laurel, several times daily. They were thus able to stay awake without losing consciousness for many nights, when they feared an

invasion by their enemies" (10, p. 373). It seems strange that some of these harmful plants (as in the case of coca and tobacco) later became very important among the companions of Lucero.

In fact, in a work completed in 1738, the Italian missionary Father Pablo Maroni, who had resided about eight years among the Maynas Indians, wrote (in the usual exaggerated manner of the apologetic writings of the Catholic missions) of the sufferings of the forest inhabitants, complaining particularly of the lack of the necessary medicaments. "Lacking these [remedies], our missionaries frequently use for this ailment [stomach disorders] the leaves of a plant called *guayusa*, similar to wild laurel. Some prefer the leaves of the plant *tripiliponi*, a plant found in Chamicuros, since these leaves are thicker and harder and less 'hot' than those of the *guayusa*. With the decoction of these leaves, taken daily with lemon or orange juice, the stomach is benefited, and the noxious effects of the excessive humidity of the forest are lessened" (10, p. 113). It has not been possible to determine the botanical identity of *tripiliponi*.

Similarly, Father Andrés de Zarate, in a letter written on August 28, 1739, describing the various products used in or extracted from the Jesuit mission territory, includes "*guayusa*, which is an herb that missionaries use in the same way as the tea of the Paraguay herb" (7, p. 406). Another Jesuit, Juan Magnin, in his description of Maynas Province written in 1740 to accompany a map of the Amazon, lists numerous plants used by the Indians, including coca and peanuts, and adds: "The *Guayupa* [sic, perhaps an error in the transcription] . . . , another beneficial potion which, when boiled, turns the water black as ink, is found in Borja, Santiago and Archidona" (14, p. 171). *Guayusa* was the beverage preferred by the Pinches (Pinches), inhabitants of the left bank of the Pastaza (22, p. 46; 23, XVI, p. 126, 127).

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This was not the end of the affair. The diabolic herb of Lucero became, with the passing of time, an important source of revenue for the Jesuits: the Jesuits brought it out from their mission, and it was sold in Quito at five leaves for one half real (17, I, p. 153). For what purpose? The explanation is given by another Jesuit: "Huayusa, not a very tall tree with leaves as long and wide as a hand, dentate and thick. These are strung together and carried from the low provinces to the highlands. Prepared in the same manner as tea, with a very agreeable taste, the infusion is said to cure chills and venereal infection. It is also used widely to overcome sterility in women, even though the condition has existed for years" (24, p. 41; 25, p. 51). In an age and in a country where dissolute customs prevailed and the incidence of venereal diseases was alarming, the travellers and scientists, Jorge Juan and Antonio Ulloa, succeeded in ascertaining the proper dosage which the Jesuits were able to prepare easily. It is thus understandable that the guayusa should have become so important, as will later be shown. It is probable that guayusa leaves reached the public mixed with leaves of other plants (see last paragraph of this article).

With the abandonment of the missions as a consequence of the expulsion of the Jesuits in 1766 (1768), the plant fell into disuse in the highlands of Ecuador. In the middle of the 19th Century, there was some mention of its use as being confined to the Jívaros and Canelos of the Napo-Pastaza Rivers. The Bishop of Cuenca, Manuel Plaza, in a report of 1853 on his visit to the region of the Jívaros, says that the Indians cultivated *guayusa*, among other plants, near their houses (4, p. 295).

In 1857 the English botanist, Richard Spruce, saw the plant cultivated among these same Indians in Antombós, below the town of Baños. A grove of remnant trees in that place was believed to antedate the Spanish conquest. That great naturalist makes some interesting observations on the custom of cleansing the stomach daily (since guayusa is used principally among the Indians as an emetic), as well as the scatological purification believed to be associated with the daily dosage (19, p. 453, 454). Contemporarily and coincidentally, the Ecuadorian geographer, Villavicencio, made the following observations:

"This habit [drinking the beverage every morning] is so widespread among them that even the children are given by the mother a fair quantity of the decoction of guayusa, and a feather is used to promote vomiting and accustom them to this practice from early years" (26, p. 373, 374).

Dr. Mildred Mathias, a botanist of the University of California of Los Angeles, has recently collected samples of guayusa in the Ecuadorian town of Zamora on the river of that name (pers. comm.).

The habit has not completely disappeared in the Peruvian-Ecuadorian east. According to a traveller, the following tribes use guayusa: Omagua, Kokama, Pánobo, Kaschibo, Koto, Pioché, Lamisto, Kichos, Kanelo, Aguano, Kandoschi, Ssabela, Chívaro, Mayoruna, Tschayahuita, Tschamikuro, Chebero, Omurana, Yagua, Auischiri, Ssimaku, Ikito, Záparo, Yameo and Pintsche; among the Pintsche, it is the preferred drink, especially at social gatherings (quoting Veigl) (20).

From the observations of the anthropologist, Rafael Karsten, among the Jívaro and Canelo Indians of Ecuador, the reader becomes convinced that guayusa is also a "magic" plant. Although the beverage is drunk by adults of both sexes, and frequently by the children, and is even given to the hunting dogs before a hunting expedition, the preparation of the decoction is exclusively the privilege of the males. (11, p. 115, 171, 204). Men and women drink it during the final feast of victory and preparation of the trophy heads (11, p. 304, 362). The same rule is observed during the feast of the women (11, p. 204). Every morning the men boil leaves to prepare a mouth wash and emetic for use by all members of the family (11, p. 174, 243). For some time after the women have planted cassava and the men plantain or mullein (fish poison plants), respectively considered as female and male plants, they abstain from drinking guayusa for fear that the plants may not grow. In other words, abstention from drinking the beverage is equivalent to a fast to assure a good harvest (11, p. 130, 131, 141).

It seems that the Jívaro Indians attribute to guayusa several effects: first, the emetic, a purifier in accordance with the belief, noted by Spruce, that it is harmful for the remains of a meal from the preceding day to remain in the stomach (11, p. 130, 174, 508; 19, p. 454); second, some narcotic or hypnotic

effect, for inducing *pequeños sueños* ("little dreams"), and for knowing in advance whether a hunting expedition will be successful. Even to see in a dream the guayusa boiling rapidly is taken as a good omen (11, p. 174, 380). Moreover, stimulant or tonic, diaphoretic and diuretic properties have been indicated by several quotations which follow. Since the chemical composition of this plant is unknown and since the plant is not well known botanically due to a lack of sufficient herbarium material, it is only possible to assume that guayusa may contain, as do *Ilex paraguariensis* St. Hil. and *I. vomitoria* [Soland. in] Ait., an alkaloid similar to caffeine with a stimulating effect. At least, that was the prevailing belief during the 18th Century: "drinking a draught in the morning, we do not feel hungry until afternoon" (see below). The various effects produced by the guayusa may be in relation to the concentration of the decoction: a light decoction acting as a stimulant, while a strong concentration may act as a vomitive (19, p. 454).

Guayusa was known not only in the Ecuadorian-Peruvian sector of the east Andean foothills, but in the Putumayo-Caquetá belt of Colombia too. From observations made during the decade 1756-1767, the Majorcan missionary Juan Serra provides valuable information regarding this plant. His first notes are concerned with Santa Rosa of the Caquetá mission and the Franciscan, José Berrutieta, president of that mission: "The day after the arrival of the President I saw strings being hung out in the patio and hanging from them bundles of leaves. I went into the kitchen and asked their purpose. A woman answered: 'Father, this is guayusa. The President drinks it twice a day, and we have hung it in the sun to dry.' I told her that I would like to try it, and she said that she would give me some in the afternoon. Later, she brought me a cupful, and I tasted it; but as it was already sweetened, I did not drink more, but told her: 'I do not like it sweet, but unsweetened, in order to discover its true taste.' Later, they brought me more, and I drank a whole cupful. It has the color of dark honey, and five leaves are enough to make a chocolate-pot full of its juice. Its taste is like tea but finer and more pleasant. When I drank it, I began to sweat and expectorate so much that I was obliged to change my habit, and within half an hour

coughed enough phlegm to fill a large cup. These effects seemed to me to be very good. I went to the President and asked him about the guayusa. He said that the beverage was excellent for the treatment of venereal diseases, that it . . . cleansed the blood, and improved the digestion and appetite, because, when taken in the morning, one does not feel hunger until the afternoon. It strengthened the body and removed all impurities through perspiration and phlegm. All these effects are true, and I have experienced them many times. Father Berrutieta told me also that guayusa taken with honey caused women to become fertile, and, if the honey was that of the bee called *apaté*, the woman, if married, would become pregnant immediately. This fact is well known and proven in Quito and the highlands. The Jesuits brought the plant from their mission and sold it in Quito at five leaves for a half real. I asked him where it might be found, and he told me that in the village of La Concepción, Fr. Jose Carvo had a big tree, but in Pueblo Viejo, the first town one reaches from here, about four days distant, there is a grove of more than one league in area, entirely of guayusa trees. I at once wrote the name of the village and the name of the tree, in order not to forget them, in order that I might provide myself with supplies for my journey and destination" (17, I, p. 153).

It is fortunate for science that the missionary Serra was curious enough to make notes of all the facts that came under his observation and that his inordinate appetite led him to try every edible substance that came into his hands. This has resulted in a valuable store of information regarding useful plants, which otherwise would not have been known because of the annihilation of the indigenous tribes which used them. His curiosity aroused by the guayusa, the friar could not rest until he had obtained some. Four days' journey on foot from Santa Rosa de Caquetá lay Pueblo Viejo, where he arrived in December, 1756.

"On Christmas Day, I asked the Spanish-speaking Mayor about guayusa. He said that there was a great deal, and that if I so wished he would have some brought, because it grew in the forest, somewhat outside the town. I told him I wanted to go there myself and see the guayusa trees. He said that I could not go, that the mountain growth of brush was dense, but I insisted, and he

assigned to me three Indians, each with a machete, which is a tool of three spans, used throughout Peru to cut brush in the forest. We took with us two *saparos* or baskets, and the Indians went before, cutting a path, and I, with another machete, did what I could. Advancing thus, we entered the forest about for one-fourth of a league. We arrived at the guayusa grove, which is on a plain. The guayusa tree is the most beautiful and luxuriant tree that I have ever seen. It grows to be rather large in girth, so much so that three men could not encircle it, and tall in proportion, with a heavy crown. The trunk is ash-color, like the trunk of the poplar, the leaf a gentle and delightful green, so much so that, seeing it, I considered the hardship of the journey well worth while. From the first tree I came to, I took some leaves and began to eat them to find out their taste. I found that it was a very agreeable, somewhat similar to tea, but finer and more pleasant. Seeing that there were many seedlings in the field, while the Indians gathered leaves and packed them in the baskets, I turned back and cut six internodes of bamboo, and, with the machete took out eighteen seedlings with roots, placing three in each internode with earth from the same place. I took them with me and, in each village of the Putumayo, I planted three guayusa trees, and they all grew, so that, at the end of three years, they were giving many leaves. In this way, all the priests were provided with guayusa for their own consumption" (17, I, p. 161). In another part of his account, Serra refers to the apaté bee, again associated with the guayusa (17, I, p. 204).

When this missionary ended his stay in New Granada and went on to Peru, he carried with him as much as a half hundredweight of the leaves (17, II, p. 279). Father Berrutieta, mentioned above, also took with him some guayusa to show in Popayán and Bogotá (17, I, p. 353).

The account given by Father Serra is confirmed by the missionaries, Bonifacio Castillo, Simón Menéndez, Roque Amaya and Manuel Antonio Suárez, in their report dated September 17, 1773. The mission headquarters was half a day's journey by canoe from the confluence of the Sucumbíos and Putumayo Rivers, on the left bank of the Putumayo: "Among the medicinal plants cultivated by our missionaries ... for the

relief of the poor Indians and themselves, the Guayusa tree is outstanding. A description of this tree is being sent, at his request, to Don Pedro de Valencia, Treasurer of the Royal Mint in Popayán. Its leaves, which are the most valued part of the plant, are eagerly sought in various parts of New Granada by those acquainted with its beneficial properties as a purgative and an aid to digestion" (5, p. 275; 27, p. 209; 2, p. 312).

In New Granada, the same thing occurred as had happened in Quito. With the scattering of the missions, guayusa appears to have been forgotten. It is again mentioned in the mid-19th Century by the priest Manuel María Albis in a report of his journey along the Mecaya, Senseya and Caucaya Rivers, a region inhabited by the Macaguaie Indians. Writing of guayusa, he says: "It is hot and used in poisonings; the burned leaves, when mixed with barley and honey are given to women suffering from amenorrhoea; when boiled and mixed with the bark of the liana *yoco* (*Paullinia yoco* R. E. Schultes & Killip), the preparation is used to cure dysentery; the liquid is used for stomach aches" (1, p. 32). These observations antedate those of Richard Spruce.

Guayusa, like sundry other useful plants of the Amazon basin, grows both wild and under cultivation. Many of the tribes of this area are nomadic, moving frequently from place to place in flight from enemies or because of the death of members of their families. There is thus the opportunity of finding in various places the plants which they are accustomed to use. When these are not found, they are usually planted. We can recall the words of Father Serra, that there was in Pueblo Viejo, Caquetá, "a grove of more than a league in size of guayusa trees" and that this was formerly an inhabited area; we remember the ease with which the guayusa is propagated—since not one of the eighteen seedlings planted by Serra from those carried in the bamboo stems was lost—and that Spruce found a grove of great antiquity near Antombós.

It is noteworthy that the equatorial Indian tribes have known and used the leaves and that the plant is not only taxonomically related to the maté of Paraguay but has similar virtues. These facts indicate that the use of this source of well-being may be revived. It is also worthy of mention that,

in addition to the South American species of *Ilex* used in the preparation of stimulating beverages, a North American species is known to be used, such as *I. vomitoria* and its var. *chiapensis* Sharp. This use was noted by Spanish members of the Panfilo de Narváez Expedition in 1528 (3, p. 537, 538; 8, p. 38, 123-131; 16, p. 97-105, pl XXIV and XXVI; 18, p. 107, 108). Still more notable is the fact that along the Chinese-Tibetan border a similar beverage is made of the leaves of the species *I. yunnanensis* Franchet (8, p. 153).

The identity of guayusa is still uncertain. In the third quarter of the 19th Century, writing of the Aquifoliaceae, a botanist states: "An analysis of the leaves of the *maté* shows the presence of the alkaloid known as caffeine, present also in tea, coffee, in *Paulinia sorbilis*, in cacao and in guayusa, which is a species of *Ilex* and grows abundantly in the Provinces of Quijos and Canelos. The Indians of those districts drink an infusion of the leaves. There are many uncivilized tribes the members of which, guided apparently by instinct, have chosen the plants indicated as being necessary to life. In regard to botanical character of the plants, this differs in each, and in the taste as well, but all contain the alkaloid caffeine. This matter deserves the attention of a philosopher" (9, p. 129, 130).

Spruce collected botanical material which was apparently incomplete or sterile. Using data of Lagerheim and Warszewicz on the use of the infusion in the Peruvian-Ecuadorian east (Huancabamba and Jaén), Loesener calls the species *Ilex guayusa*, pointing out its similarity to *I. paraguayensis* St. Hil. and *I. nitida* (Vahl) Maxim. The material studied for the description was incomplete (12, p. 310, 311). Warszewicz's original material, kept in the Botanical Museum at Berlin-Dahlem, was destroyed during the war, and only the photograph remains.

It is probable that another species growing within the area of dispersion of the use of guayusa, as indicated in colonial records, may have been used for the beverage. In northern Peru, *Ilex tarapotina* Loes. (13, p. 284) is believed to be the source of "té o maté".

Some plants of other families have been called "guayusa." This is true of several Piperaceae (Mathias, Mildred, pers. comm.), of the Monimiaceae *Siparuna eggersii* Hieron. (12, p. 311) and perhaps other species of the

same genus (19, p. 240), all aromatic plants from the equinoctial Andes. In the case of *Siparuna*, the name originated probably from a similarity of use, since all references to guayusa in the Amazon area refer to a tree and not to herbaceous plants.

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